Work Orde August-28-13 12			2179	*10	6233*						Page 1
Revision ID:	D2179 Hinge Bracket	B 1	06223	Accept	*N900	<b>040</b>	100	)* ፡	Setup Sta	IV	S1* S2*
	8/28/13	Start Qty: 6.00 Req'd Qty: 6.00	*6* *6*	*24*	Cust Item I Customer:	D:				IN.	<b></b> つ/
Approvals:	Process Pla	n: MLJ	Date: 13-08	30 Tooling:	Da	ate:	_	]	Run Sta	1/7	R1*
	QC:	····	• -		Da	ate:			Sto	<sup>op</sup> *N	R2*
Sequence ID/ Work Center ID	)	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revi	ision Nbr					4				
D2179	Rev	В									
*100 *100* Waterjet FLOW CNC Waterje	t	FLOW WATER JET  Memo  1-Cut as portion of the desired in the second seco		0.00 0.00 ev: <b>3</b> Prog Rev:	<b>3</b> 2-			24	_0_		<u>Ae</u> 13.11.18
*110 *111 <b>0</b> *	*	QC2- Inspect parts off	machine FAI/FAIB	0.00				24	_ 0_		<u>Au</u> 13.11.18
Quality Control		Memo		DAS							13.11.18
*120 *120*		QC8- Inspect parts - se	cond check	0.00 <b>27</b> 9.89, 0.00 <b>1</b> 3 11	118			04 Caux	1	·	- <del></del>

NCR: Y	'es / 1	lo			WORK ORDER NON-C	ON	<b>IFORM</b>	MANCE / UPI	DATE			
	•				•				4	QA Closed:	Date	2:
Work Orde	er:				DISPOSITION				AGAIŅST DE	PARTMENT		
Part N	lo	<del></del>		····	Rework Scrap Use-as-is		Machining Small Fab		Crosstube Small Fab Finishing	4	Water Jet d. Eng. Coor. re/Packaging	Engineering Quality Other
NCR No.				Work Order Update	]		Large Fab	Composite	]	Supplier		
Root				Descri	ption of work order update	lr	nitial	Act	tion	Sign &		
Cause	Da	te Step	Qty	1	or Non-conformance	Chi	ef Eng	Desci	ription	Date	Verification	QC Inspector
Doc/Data	_											
Equip/Tooling	_											
Operator												
Material				İ								
Setup												
Other			-									
Process												
Supplier		ĺ									1	
Training												
Unapproved												
						AUL	T CATE	GORY				
Landir 1	ng Gear			_	General ¬				_	7	Г	¬₋ ,
	Bend	J			Bend	$\vdash$	Grain		<u> </u>	Ovalized	<b>-</b>	Pressure/Forced
		e Not Conce	entric to	o/s	BOM/Route	-	Hardwa		<u> </u>	Over/Under		Temperature/Cure
	Crac			<u> </u>	Broken/Damaged	-		ion Incomplete	⊢	Part incorre		Weld
	_	ned/Crimped	d	_	Burrs	-		ions Incomplete/	Unclear	Part Lost/M	ssing	Wrong Stock Pulled
	Cuffs			_	Contamination	-	Mainte		<u> </u>	Part Moved		
	$\vdash$	Treat		<u> </u>	Countersink	-	Mislabe		<u> </u>	Positioned V		¬₌.
	_	ction Strip i	n Tube	_	Cut Too Short	$\vdash$	Misread	d	L	Power Loss/	Surge	Other
	Ripples in Bend Drill Holes			$\vdash$	Offset							
	Torque Waves in Extrusion Drawing				Out of 0	Calibration						

Out of Sequence

Outside Dimensions

DQA:

Date:

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Finish

Wor	k Or	der ID	106233 PM
Augus	t-28-13	12:52:14	PM

## \*106233\*

Page 2

August-28-13	12:52:14 PM	·									
Item ID: Revision ID:	D2179			Accept	*N900	<b>040</b>	100	)* s	etup Start	*N.	S1*
Item Name:	Hinge Bracke	t Plate							Stop	*N:	S2*
Start Date: Required Date	8/28/13 :: 8/28/13	Start Qty: 6.00 Req'd Qty: 6.00	*6* *6*	•	Cust Item I Customer:	D:					
Reference:	Dwagana Dla	an:	Datas	Tooling:	De	nte:		R	un Start	*NII	<b>⊋</b> 1*
Approvals:		3111;	Date:		3,000	ite:			Stop	*NI	R2*
Sequence ID/ Work Center I	ID .	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130		Chemical Conversion Coa	t per QSI005 4.1	0.00				077	, -1	2 ()	,5/
*130* HandFinish		Memo		0.00				24	Mg	13-11	/ <b>8</b> 
Hand Finishing											- :
*1 <b>4</b> 0		White Gloss(Ref. 4.3.5.1)	per QS1005 4.3-Alum	0.00				24	ф 1	13×11-/	<b>DA</b> 34 2, 9-8
Powder Coating		Memo START TIME	: 3:05 FINISH TIME:	0.00  OVEN TEMPERATURE:							
150		QC3- Inspect Part Finish		0.00 DAS				0.4			
*150* QC Quality Control		Memo		0.00 Blul2	)			29		-	
1								wan			

											DQA:	Date	:	
NCR:	Yes	/ No				WORK ORDER NON-O	O	VFORM	MANCE / UPDATE		QA Closed:	Date	:	
Work Ord	or:	* **				DISPOSITION		AGAINST DEPARTMENT/PROCESS						
Part No.  NCR No.			Rework Scrap Use-as-is Work Order Update	Skid-tube Crosstube  Machining Small Fab  Thermoforming Finishing  Large Fab Composite			nall Fab nishing	1	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other				
Root					Descri	ption of work order update		nitial	Action		Sign &			
Cause		Date	Step	Qty		or Non-conformance	Ch	ief Eng	Description	l	Date	Verification	QC Inspector	
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved								TCATE	CORV					
	FAULT CATEGORY													
Landi	ing (	1			_	General	_	1		_	1	Г	٦	
	Centre Not Concentric to O/S Cracks Crushed/Crimped			Bend BOM/Route Broken/Damaged Burrs Contamination		Grain Hardware Inspection Incomplete Instructions Incomplete/Unclear Maintenance			Ovalized Over/Under Part Incorred Part Lost/Mi Part Moved	ct	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled			
	Heat Treat				Countersink		Mislabeled			Positioned V	Vrong			

Misread

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Power Loss/Surge

Other

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Inspection Strip in Tube

Torque Waves in Extrusion

Cut Too Short

Drill Holes

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

W۵	rk (	Order	· ID	104	5233
VV ()	I'K '	mater	117	1 175	14.7.7

Quality Control

\*106233\*

Page 3

August-28-13 12:52:14 PM Item ID: D2179 Accept \*N900040100\* Setup Start **Revision ID:** Stop Hinge Bracket Plate **Item Name:** 8/28/13 Start Oty: 6.00 **Start Date: Cust Item ID:** Required Date: 8/28/13 Req'd Qty: 6.00 **Customer:** Reference: Run Start Process Plan: **Tooling:** Approvals: Date: Date: Stop QC: SPC (Y/N): Date: Date: Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Accept Reject Reject Insp. Work Center ID Description **Run Hours** Code Qty Qty Number Stamp Identify as per dwg & Stock Location 160 0.00 DAS \*160\* Packaging 0.00 Memo Packaging 170 QC21- Final Inspection - Work Order Release 0.00 \*170\* QC 0.00 Memo

MB-11-30

										DQA:	Date:	
NCR: Y	es /	No				WORK ORDER NON-C	ONFOR	MANCE / UP	DATE			
										QA Closed:	Date:	
Work Orde	r.					DISPOSITION		AGAINST DEPARTMENT/PROCESS				
WOIK OIGC						Rework		Skid-tube	Crosstube	]	Water Jet	Engineering
Part N	lo.					Scrap		Machining	Small Fab	Pro	d. Eng. Coor.	Quality
		· · ·				Use-as-is	Ther	moforming	Finishing	Rec/Sto	re/Packaging	Other
NCR No.						Work Order Update		Large Fab	Composite		Supplier	
Root					Descri	ption of work order update	Initial	Δ.	ction	Sign &		
Cause	٥	ate	Step	Qty	1	or Non-conformance	Chief Eng	l .	cription	Date	Verification	QC Inspector
Doc/Data	+	-	эсер	αι,	`	or troit comortinance	Cinci Ling	, , ,	peron	Dute	Vermedalon	Qospecto.
Equip/Tooling	-				Ī							Ì
Operator												
Material	$\dashv$											
Setup												
Other												
Process												
Supplier												
Training												
Unapproved												
						F	AULT CAT	EGORY				
Landi	ng Gear					General				_		-
	Ben	ding				Bend	Grain			Ovalized		Pressure/Forced
	Cen	tre No	ot Concei	ntric to	tric to O/S BOM/Route			are		Over/Under	tolerance	Temperature/Cure
	Cra	Cracks Broken/Damaged				Broken/Damaged	Inspec	tion Incomplete		Part Incorre	ct	Weld
	Crushed/Crimped Burrs				Instru	ctions Incomplete,	/Unclear	Part Lost/M	issing	Wrong Stock Pulled		
	Cuffs Contamination			Maint	Maintenance							
	Heat Treat Countersink			Mislab	eled		Positioned V	Wrong	_			
	Inspection Strip in Tube Cut Too Short			Cut Too Short	Misrea	Misread			'Surge	Other		

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Page 1 /

August-28-13 12:52:17 PM

Work Order ID: 106233

\*106233\*

D2179 Parent Item:

\*D2179\*

Parent Item Name: Hinge Bracket Plate

**Start Date: 8/28/13** 

Required Date: 8/28/13

Start Qty: 6.00

Required Qty: 6.00

Comments:

IPP A00.07.17New IssueEC

-IPP Rev:B Now on Waterjet 07-02-05 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M5052H32S.040		Purchased	No			100	sf	213.1000	0.0091	0.057473			
*M5052H3 5052-H32 .040 Sheet	325 040	*							**		Ac	13:)1	.18
				Location	l	Loc	Otv	Loc Code					

<b>Location</b>	Loc Qty	Loc Code	
MAT022	213.100045		
122406	15.000045		
124445	7		
124573	39.1		124573 - 12
125552	24		
m126593	128		

						•				DQA:	Dat	te:	
NCR: Y	es / No				WORK ORDER NON-O	CON	<b>IFORN</b>	MANCE / UP	DATE				
										QA Closed:	Dat	te:	
Work Orde	or.				DISPOSITION				AGAINST DE	/PROCESS			
Part N					Rework Scrap		Skid-tube Crosstube Machining Small Fab			Water Jet Prod. Eng. Coor.			Engineering Quality
NCR N	lo.				Use-as-is Work Order Update	]		oforming Large Fab	Finishing Composite	Rec/Sto		Other	
Root				Descri	ption of work order update	l:	nitial	Ac	tion	Sign &			
Cause	Date	Step	Qty	(	or Non-conformance	Ch	ief Eng	Desc	ription	Date	Verification	n	QC Inspector
Doc/Data		1											
Equip/Tooling							1						
Operator													
Material													
Setup							ł						
Other													
Process													
Supplier													
Training													
Unapproved		İ											
		•			F	AUL	T CATE	GORY					
Landii	ng Gear				General		•						
	Bending				Bend		Grain			Ovalized		P	ressure/Forced
	Centre N	ot Conce	ntric to	o/s	BOM/Route		Hardwa	re		Over/Under	tolerance	П	emperature/Cure
	Cracks	Broken/Damaged			П	Inspecti	on Incomplete		Part Incorre	ct	$\square_{v}$	Veld	
	Crushed	Crimped			Burrs	П	l '	ons Incomplete/	Unclear	Part Lost/Mi	issing	$\square_{v}$	Wrong Stock Pulled
	Cuffs Contamination			_	Mainte			Part Moved	- 1	ـــــا	~		
	Heat Tre	at			Countersink	$\vdash$	┥ ⊢			Positioned V	Vrong		•
	Inspection Strip in Tube Cut Too Short			$\vdash$	<del>-</del>			Power Loss/	- T	$\Box$	Other		
	$\mathbf{H}$ $\mathbf{H}$		Drill Holes	$\vdash$	Offset			<b>_</b>	~ I				

Out of Calibration

Out of Sequence

Outside Dimensions

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

DART AEROSPACE LTD	Work Order:	106233
Description: Hinge Bracket Plate	Part Number:	D2179
Inspection Dwg: D2179 Rev: B		Page 1 of 1

## FIRST ARTICLE INSPECTION CHECKLIST

X First Ar	ticle	Prototype
------------	-------	-----------

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.350	+/-0.010	,350	_		V	JKM-01
1.170	+/-0.010	1570	-		V	
1.520	+/-0.010	1.520	_		V	
0.340	+/-0.010	.340	-		ý	
0.680	+/-0.010	.680	_		٧	
Ø0.171	+0.005/-0.000	.171	~		<b>~</b>	
R0.13	+/-0.030	.13	_	·	V	
					*****	
	- AMORE - L	<b></b>				
						No Constitution of the Con

Measured by: Ac Audited by: 27 Prototype Approval: N/A

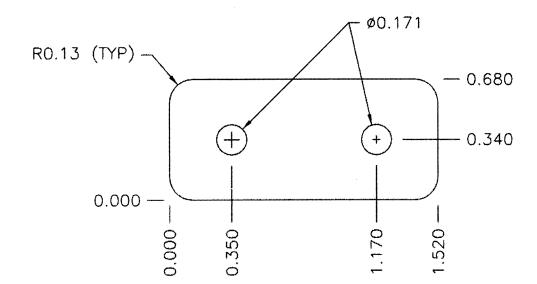
Date: 13 11 18 Date: 13 11 18 Date: N/A

Rev	Date	Change	Revised by	Approv#d
Α	04.10.05	New Issue	KJ/JLM A	
			777	7



DESIG	KH	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA				
CHEC	(EO	VPPROVED	DRAWING NO. D2179 SHEET	REV. B			
DATE	L		TITLE	SCALE			
00.06.20			HINGE BRACKET PLATE	2:1			
Α		95.03.17	NEW ISSUE				
В		00.06.20	DWG No. D2179 WAS D2399				





MATERIAL: 5052-H32 (QQ-A-250/8) OR 6061-T6 (QQ-A-250/11)

OR 2024-T3 (QQ-A-250/4) 0.040 THICK

FINISH: CHEMICAL CONVENSION COAT PER DART QSI 005 4.1

POWDER COAT GLOSS WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3 TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

Copyright © 1995 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.